



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,941	12/29/2004	Masaya Tanaka	4731-0107PUS1	5052

2292 7590 11/01/2007
BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

CHEN, JAY Z

ART UNIT	PAPER NUMBER
----------	--------------

4111

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

11/01/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/519,941

Applicant(s)

TANAKA, MASAYA

Examiner

Jay Z. Chen

Art Unit

2709

4/11

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/29/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al. (JP2000-319187 A).

Referring to claim 1, Tanaka teaches a container structure that serves as an enclosure member for hermetically sealing a body surface from the outside air [0029]. This allows the introduction of a pressurized carbon dioxide gas into the inside of the container structure [0030]. Tanaka also teaches a cosmetic composition capable of retaining a carbon dioxide gas, wherein such composition is applied to the skin and assists in the transdermal or transmucosal absorption of carbon dioxide to the skin while inside the sealed container structure (claim 1 and claim 19).

Referring to claim 3, Tanaka teaches a carbon dioxide external administration device that is comprised of a carbon dioxide absorption aid which contains at least one carbon dioxide-dissolving medium selected from the group comprised of water [0049], alcohols having a high vaporization temperature [0054], oils [0054], fats [0051], and waxes [0061].

Art Unit: ~~3700~~ 2111

Referring to claim 4, Tanaka teaches a carbon dioxide external administration device comprised of an absorbency material, such as a gauze or a nonwoven fabric that is capable of serving as a carbon dioxide absorption aid wherein the material is a composition impregnated with a liquid containing at least water [0049].

Referring to claim 5, Tanaka teaches a carbon dioxide external administration device that is characterized by having a carbon dioxide absorption aid comprised of a viscous material containing at least water (claim 29).

Referring to claim 6, Tanaka teaches an external carbon dioxide administration device and a carbon dioxide-dissolving medium comprised of a viscous material containing one thickener selected from the following groups: sodium alginate [0042], propylene glycol alginate [0042], carrageenan [0037], sodium hyaluronate [0043], pectin [0037], polyvinyl alcohol [0044], and polyvinyl pyrrolidone [0044].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: ~~3709~~ 4111

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (JP2000-319187 A) as applied to claim 1 above, in view of Kato (4,781,645).

Referring to claim 2, Tanaka teaches a container structure capable of administering carbon dioxide gas into a sealed enclosure member [0029].

Tanaka does not teach the carbon dioxide amount indicator that expands upon being supplied with carbon dioxide and contracts by the decrease of the carbon dioxide gas inside the container structure. Kato teaches an inflatable bag capable of indicating the amount of carbon dioxide inside a sealed enclosure member, wherein said bag expands upon carbon dioxide being supplied to the enclosure member and contracts by the decrease of carbon dioxide in the enclosure member (claim 15). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the container structure of Tanaka with the inflatable bag of Kato in order to serve as a carbon dioxide indicator.

Art Unit: ~~3709~~ 4111

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (JP2000-319187 A) as applied to claim 1 above, in view of Ward et al. (5,756,632).

Referring to claim 7, Tanaka teaches an external carbon dioxide administration device that is comprised of a carbon dioxide absorption aid [0033]. Tanaka does not teach the carbon dioxide absorption aid that is comprised of a carbon dioxide-dissolving medium consisting of at least a calcium alginate hydrogel. However, it is well known in the art to use a copolymer that is comprised of a calcium alginate hydrogel for absorbing carbon dioxide as exemplified in the teaching of Ward (column 41, lines 13-37). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a calcium alginate hydrogel as a carbon dioxide absorbing medium in Tanaka because one in the art would have chosen it from among known, effective carbon dioxide absorbing or dissolving media. None, but only the expected result of providing carbon dioxide absorbing material to a composition of Tanaka would this have been achieved.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (JP2000-319187 A) as applied to claim 1 above.

Referring to claim 8, Tanaka teaches an external carbon dioxide administration device consisting of a carbon dioxide-dissolving medium that is an emulsion comprised of at least an oil [0054], a fat [0051], or water [0048]. Tanaka does not explicitly teach a surfactant in the carbon dioxide absorption aid. However, in order to effectively form an emulsion composition (i.e. oil and water), it would

Art Unit: ~~3709~~ 4111

have been necessary to use a surfactant. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art that an emulsion of said carbon dioxide absorption aid would be comprised of a surfactant.

Conclusion

8. Claims 1-8 are not allowed.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay Z. Chen whose telephone number is (571) 270-3638. The examiner can normally be reached on 8 am - 5 pm Eastern. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Yao can be reached on (571) 272-1224. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

Application/Control Number: 10/519,941

Page 7

Art Unit: ~~3709~~ 4111

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JC



SAMCHUAN C. YAO
SUPERVISORY PATENT EXAMINER